

REMARKS

The Examiner has objected to the drawings as failing to comply because they include the following reference sign(s) not mentioned in the description:

- 1.) None of the reference signs were mentioned in the specification.

Correction is required.

The drawings must show every feature of the invention specified in the claims. Therefore, the mulch must be shown or the feature(s) canceled from the claim(s), none of the figure flow charts nor the Brief Description of Drawings section of the specification identify mulch. No new matter should be entered.

Applicant has added a drawing which shows the features specified in the claims. No new matter has been entered.

The Examiner has rejected claims 26-30, 38, 50, and 52 as being obvious over U.S. Patent No. 6,324,781 to Stevens in view of U.S. Patent No. 4,126,417 to Edwards.

Regarding claims 26 and 50, the Examiner states that Stevens teaches a colored mulch product (Stevens abstract and Col. 6 line 35) consisting essentially of a material comprising a fiber cellulose, clay, loam, sand and/or combination; a binding agent; a dye and/or pigment; Abstract- A mat for use in horticultural applications is formed of shredded paper. The mat is formed by treating the paper with an adhesive, depositing the paper onto a conveyor, compressing the paper between rollers, and drying the paper using dryers. The mat may also incorporate seed or other additives such as fertilizers, herbicides or pesticides.

Col. 6 line 35 states that "If desired, a coloring may be added to enhance the appearance of the mat in use."

Stevens does not explicitly teach that the dye indicates to a user environmental conditions of soil where the mulch is placed and the color fades or disappears in response to a lack of nutrient or fertilizer in the mulch. However, Stevens teaches that the mulch product contains fertilizer (Stevens Col. 4 line 50 and abstract) ("If desired, a fertilizer may be incorporated into the mat 20, for example, between the respective mat layers 32 and 33 to promote growth of the seeds 31") and Edwards teaches that it is old and notoriously well-known in the art to color fertilizer (Edwards Col. 4 line 12). ("The fertilizer in the form of a color-coded pill supplies a pH of 6.5 and 100 ppm nitrate in 1 pint of water and contains 15 elements in the following ratio and minimum amounts..."). It would have been obvious to modify the teachings of Stevens with the teachings of Edwards for the reasons set forth by Edwards (Edwards Col. 1 line 27-28). ("Materials are preferably color-coded for convenience and safety, i.e., the fertilizer may be green, the acidifier yellow, the insecticide red and the fungicide blue") This modification inherently teaches that the mulch color changes as the fertilizer, which is one component of the overall mulch product, penetrates the soil since the color of the fertilizer fades indicating a lack of nutrient in the mulch.

Applicant submits the Declaration of Lee Hoffmann. Mr. Hoffmann has 28 years of experience in the field of agricultural applications. (Hoffmann declaration paragraph 1). Mr. Hoffmann has reviewed the application of the present invention and the prior art cited by the patent examiner. (Hoffmann Declaration paragraphs 2 and 3).

Stevens relates to a mat for use in mulching applications which comprises substantially a paper material. Steven states that a coloring may be added to any mat to enhance the appearance of the mat in use. For example, Stevens states that the color green may be used to match a lawn or grass area. (Hoffmann Declaration paragraph 4).

Claim 26 and its dependent claims require a colored mulch product which consists essentially of a material comprising a fiber cellulose, clay, loam, sand , and/or a combination of same; a binding agent; and a dye and/or pigment; wherein the dye indicates to a user environmental conditions of the soil where the mulch is placed. (Hoffmann Declaration paragraph 5)

Although Stevens teaches adding a dye to complement the color of the area where the mulch is placed, the dye used by Stevens does not indicate to a user the environmental conditions of the soil where the mulch is placed. (Hoffmann Declaration paragraph 6).

Edwards does not teach that it is known in the art to color fertilizer. Edwards relates to a means for testing and treatment of soil in which a plant is growing in a container. A stick having a pH testing coating on one side and a nitrate testing coating on the other side, the coating changing colors during testing and being juxtaposed to colored sections for matching purposes to determine pH and nitrate levels. The kit includes color coated nitrate and acid pills as well as color coated fungicide and insecticide pills. (Hoffmann Declaration paragraph 7).

Edwards specifically states that the media cannot contain any fertilizer other than limestone used for pH correction, contains no quickly rotatable organics such as peanut hulls, corn cobs, sawdust, manure or sedged peat moss, contains no fine clay which would cloud the effluent. (Hoffmann Declaration paragraph 8).

Edwards further teaches that the container must drain quickly. (Hoffmann Declaration paragraph 9).

Edwards teaches recovering water from a container and testing the water recovered from a stick. Edwards specifically relates to testing the water which seeps through a container having a plant. Edwards specifically states that the soil cannot contain any mulch because it would cloud the effluent. The soil and/or mulch is never colored. (Hoffmann Declaration paragraph 10).

Stevens does not teach that the color of the mulch should change. Stevens adds color to the mulch so that the green mulch looks like the green grass. Stevens would not want the mulch to change color or else it would not serve the function taught by Stevens. (Hoffmann Declaration paragraph 11).

Edwards teaches against using mulch and does not teach adding a dye to a mulch which would indicate to a user environmental conditions. Therefore, Stevens in view of Edwards does not teach or make obvious the claims of the present invention. (Hoffmann Declaration paragraph 12).

For the reasons stated above, claims 26-30, 38, 50, and 52 are not obvious over Stevens in view of Edwards.

Regarding claim 27, the Examiner states that Stevens as modified teaches nitrogen, phosphorous, and potassium fortifiers (Stevens abstract last line).

For the reasons stated above, claim 27 is not obvious over Stevens in view of Edwards.

Regarding claims 28-30, the Examiner states that Stevens as modified teaches the dye inherently indicates to the user the acidity of the soil; dye indicates to a user the moisture content of the soil; the chemical content of the soil.

For the reasons stated above, claims 28-30 are not obvious over Stevens in view of Edwards. Further, Stevens does not state anywhere that the dye used indicates acidity, moisture content or chemical content of the soil.

Regarding claim 38, the Examiner states that Stevens as modified teaches the mulch is the same or similar color of an actual plant, flower, fruit, or vegetable of a seed planted to the mulch (Stevens Col. 6 line 37). ("For example, the color may be green to match a lawn or grass area").

For the reasons stated above, claim 38 is not obvious over Stevens in view of Edwards.

Regarding claim 52, the Examiner states that Stevens as modified inherently teaches a method for adjusting the chemical content of soil by placing a colored mulch on top of the soil (Stevens abstract); changing colors of the mulch based on condition of the soil; adding chemicals to the soil based on the color of the mulch (Edwards teaches that additional nutrients are required when previous applications have been depleted Col. 4 line 55-58). ("It is unlikely over 4 pills would be necessary to maintain

rapid growth because the soil does have some absorptive ability and to add more at one time would be potentially dangerous to the plant").

For the reasons stated above, claim 52 is not obvious over Stevens in view of Edwards.

The Examiner has rejected claim 32 as being obvious over U.S. Patent No. 6,324,781 to Stevens as applied to claim 26 above, and further in view of U.S. Patent No. 5,734, 167 to Skelly.

Regarding claim 32, the Examiner states that Stevens as modified is silent on the dye is florescent. However, Skelly teaches it is old and notoriously well-known to dye agricultural products with florescent dye (Skelly Col. 1 line 35-45). It would have been obvious to modify the teachings to enable safe night time agricultural operations as taught by Skelly. (Skelly Col. 1 lines 1-26).

Col. 1, lines 1-26 state:

"As the world's need for food increases, the need for efficient food production also increases. Seasonal variation and nightfall limits the time available for planting, fertilizing, harvesting and other farming procedures.

Night farm operations, particularly operations that require transversing a field, are difficult because it is difficult for farm equipment operators to see where they are going and where they have been. Lighting the entire field at night particularly large fields, is expensive and impractical.

Nighttime spraying of crops is difficult because it is difficult to see where spray is applied; yet, daylight spraying of crops, particularly orchards, is often undesirable because valuable insects, such as bees, are present and frequently the bees are killed. The wind during the day also carries the spray beyond the target area.

It would be desirable to have a method of farming at nighttime that; permits the equipment operators to

determine where they have been, and where they are going. It would also be desirable to have a method that permits a farmer to determine areas recently sprayed with herbicides, pesticides and fertilizer. It would be desirable to have methods and apparatus for applying pesticides at night, and for farming at night particularly planting at night."

Col. 1, lines 35-45 state:

"The methods of the present invention employ fluorescent dyes and pigments, preferably fluorescent pigments, and illumination sources which emit light of wavelength that cause the fluorescent pigments and dyes to fluoresce, so that the pigments and dyes are visible at night, as well as during the day. Preferably, the methods employ a water based pigment system which contains a pigment possessing excellent water resistance and which does not contain volatile organic solvents."

Skelly relates to providing florescent markers along a field. It does not discuss providing a fluorescent dye to a mulch product. (Hoffmann Declaration paragraph 13). For the reasons stated above, claim 32 is not obvious over Stevens in view of Skelly.

The Examiner has rejected claim 47 as being obvious over U.S. Patent No. 6,324,781 to Stevens.

Regarding claim 47, the Examiner states that Stevens teaches a colored mulch product comprising a material of a fiber, cellulose, clay, loam, or sand and/or a combination of the same; a binding agent; and a dye and/or pigment (Stevens abstract), but is silent on the colored mulch product produced by an agglomeration operation. However, it would have been obvious to modify the teachings since the modification is merely an engineering design choice of selected an alternate equivalent old and well-known means of manufacturing that is notoriously well-known for use in manufacturing fertilizers and is commonly used for application of a binding and


coloring agent to an object. One of ordinary skill in the art would modify the teachings with this known equipment for an efficient means of manufacturing the fertilizer and for thoroughly coating the cellulosic material with binding agent and dye.

For the reasons stated above, claim 47 is not obvious over Stevens.

Claim 50 requires that the color of the mulch fade or disappear in response to lack of nutrient or fertilizer in the mulch. Neither Stevens nor Edwards teaches this. In fact, Stevens states that the Mulch can be colored for aesthetic purposes. Therefore, the user would not want the color to fade or disappear due to a lack of nutrient or fertilizer. Claim 50, therefore is not obvious.

Applicant believes that the application is now in condition for allowance.

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for Patents, P.O. Box 1450, Alexandria, VA 22313 on
March

Signature: 
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Respectfully submitted,



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